Filename=TQPSReplacementPro1.doc 7/2/2002

Procedure for replacing a power supply that has a “tq” in the sitewide name

1. If you have labels you should bring them out with you to the p.s. you will be working on. Bring a key to unlock the rack door.

2. Go to the p.s. that must be replaced. Confirm that it is a p.s. that has a “tq” in the sitewide name. For example if the p.s. sitewide name is “yo12-tq5-ps” then it is a tq p.s.

3. Now that you have found the p.s. you are interested in you will find there are 3 p.s.’s in the same rack that are “tq” type p.s.’s.

4. Have MCR run the current to zero amps for only these three p.s.’s in the rack you will be working in.

5. After MCR confirms that the current = zero amps, ask MCR to put these three p.s.’s into the STANDBY state.

6. After you see the p.s.’s are now in STANDBY you can manually press the OFF pushbutton on all three p.s.’s so they are in the OFF state.

7. Now turn off the circuit breaker on the front of all three p.s.’s.

8. Now turn off and lockout the 208VAC disconnect feeding this rack. At the top of the rack you will see the name of the rack. This is the name you should look for on the 208VAC disconnect.

9. Go to the front of the p.s. and remove the plastic cover in front of the control bucket.

10. You should look at the labels on the fibers going into the fiber optic interface card. You will notice that the top fiber has a lot of words on it but what you need to know is the part that says “TX IN 1”, the fiber with the label ”TX IN 1” goes into the top input of the fiber optic interface card. The other fiber is labeled “RX IN 1” and that goes into the lower input of the fiber optic interface card.

11. Remove the fibers from the fiber optic interface card. Push in, turn to the left and pull.

12. Open up the rear door of the rack. Unlock the door with the rack key.

13. If you have labels with you then you should labels all of the DC cables that get connected to the p.s. If you don’t have labels then you should remember how the DC cables get connected to the p.s. The existing labels may not be correct. Look at the labels before you remove the DC cables and mark down where they are connected to on the p.s.

14. Once you have written down the existing labels and how the DC cables are connected to the p.s. you can remove all of the DC cables. Be sure to use (2) 9/16 inch wrenches on the buses when removing the DC cables so you do not place any stress on the buses and break them off internally.

15. There will also be a single 16AWG size wire connected to the negative terminal of the p.s. with a ring lug. This wire must also be removed. This wire is part of the soft ground system on the output of the p.s.

16. Remove all 4 D connectors on the bottom right hand side on the rear of the p.s.

17. Now you should write down the color code for the AC connections and then remove the AC connections.
AC Connection Color Code(Left to Right):_____

18. You can now unscrew the front of the p.s. and rack it out. You may not be able to get the p.s. off the chassis slides unless you lift the latches on the side of the chassis slides. Tapping the latches into the upright position helps with the removal and installation process.

19. The spare p.s.'s are in 1007W. Pick one up and bring it to where you will be installing it. Make sure that the spare p.s. you take from 1007W has a label on it that says ready for service.

20. Pull the fiber optic interface card and current regulator card out of the p.s. that is being replaced. Put these 2 cards into the new p.s. that is going into the rack. If the spare p.s. is missing any other cards then you can take those out of the p.s. that is being replaced.

21. Re-connect the new p.s. BE CAREFUL NOT TO OVERTIGHTEN THE CONNECTOR SCREWS ON THE D CONNECTOR SHELLS. MAKE SURE YOU USE (2) 9/16 INCH WRENCHES ON THE BOLTS OF THE DC BUSES.

22. Re-connection list:
    a. DC Cables
    b. 16AWG size with ring lug to negative terminal of p.s.
    c. AC connections
    d. D Connectors
    e. Reconnect the Fibers to the fiber optic interface card.

23. Bolt up the rear door when done.

24. Unlock and turn on the disconnect for the rack and turn on the circuit breaker for all three of the p.s.'s in this rack. Put the p.s. into LOCAL and STANDBY. You should have only the quench fault on the control card. You can now put the p.s. back into REMOTE and hand it over to main control.